

Notice of Allowability

Application No.

10/751,729

Applicant(s)

HWANG ET AL.

Examiner

Thomas D. Alunkal

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Remarks filed 7/12/07.
2. ☒ The allowed claim(s) is/are 1-52.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER

Allowable Subject Matter

Applicant has submitted verified English translations of the foreign priority documents. The Examiner has reviewed these translations and deems them supportive of the subject matter of the present application.

Claims 1-52 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art (see cited references) taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the independent claims, 1, 10, 19, and 22 in such a manner that a rejection under 35. U.S.C 102 or 103 would be proper.

Regarding claim 1, the prior art taken either singularly or in combination fails to anticipate or fairly suggest a write once disc, comprising: at least one record layer on which data is recorded; ***a temporary defect management area having first temporary defect information regarding only a defect in the recorded data detected during a corresponding first recording operation other than a prior recording operation, and first temporary defect management information for managing the first temporary defect information; and at least one defect management area in which the temporary defect information and temporary defect management information recorded in the temporary defect management area are recorded as defect information and defect management information, respectively***, wherein the defect information and defect management information and/or the temporary defect information and temporary defect management information

are used by a recording and/or reproducing apparatus to perform defect management with respect to the data recorded on the at least one record layer.

Regarding claim 10, the prior art taken either singularly or in combination fails to anticipate or fairly suggest a method of managing disc defects, comprising: recording only information regarding a defect detected in data, which is recorded in a data area of a disc during a recording operation having an index of i , where i is an integer, as i th temporary defect information in a temporary defect management area of the disc; ***recording management information for managing the i th temporary defect information as i th temporary defect management information in the temporary defect management area; repeating the recording temporary defect information and the recording the temporary defect management information at least once while increasing the index i given to the recording operation, the temporary defect information, and the temporary defect management information by 1 so as to record temporary defect information and temporary defect management information having only defect information for the corresponding one of the recording operations***; and reading and writing all of the recorded temporary defect management information and temporary defect information in a defect management area of the disc.

Regarding claim 19, the prior art taken either singularly or in combination fails to anticipate or fairly suggest a recording and/or reproducing apparatus comprising: a recording/reading unit that records data on and/or reads data from a disc; and a controller that controls the recording/reading unit to record in ***a temporary defect***

management area temporary defect information regarding a defect detected from a portion of the data recorded in a data area of the disc in a corresponding one of recording operation units, and to record in the temporary defect management area temporary defect management information for managing the temporary defect information in the temporary defect management area, where the temporary defect information does not include information regarding another defect detected during a prior recording operation unit.

Regarding claim 22, the prior art taken either singularly or in combination fails to anticipate or fairly suggest a recording and/or reproducing apparatus comprising: a recording/reading unit that records data on and/or reads data from a disc; and a controller that controls the recording/reading unit to record information regarding a defect detected from data, ***which is recorded in a data area of the disc according to recording operation having an index of i , where i is an integer as i th temporary defect information in a temporary defect management area; to record defect management information for managing the i th temporary defect information as i th temporary defect management information in the temporary defect management area; record data in the data area while increasing the index i given to a corresponding recording operation, a corresponding temporary defect information, and a corresponding temporary defect management information by 1; and to record all of the recorded temporary defect information and temporary defect management information in a defect management area during disc finalization.***

Dependent claims 2-9, 11-18,20-21, and 23-52 are allowed with their respective base claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ito et al (US 6,160,778) disclose An information recording medium of the present invention includes: a volume space in which user data is recorded; a spare area including a replacement area which may be used in place of a defective area included in the volume space; and a defect management information area in which defeat management information for managing the defective area is recorded. The defect management information includes status information indicating whether the defective area is replaced by the replacement area. Kim et al (US 6,564,345) disclose a method for creating/writing defect management information of an information recording medium and an apparatus and optical disc based on the method. In the present invention, it depends on the type of data to be reproduced whether or not defective sectors which are detected during reproduction operation are replaced with non-defective sectors. If read-out errors are detected in reproducing non-audio/video data, linear replacement algorithm is applied to the corresponding defective sectors. On the other hand, in case of audio/video data, location information of the corresponding defective sectors is just kept without any sector replacement. Therefore, this invention enables to reproduce audio/video data in real-time regardless of the presence of defective sectors and to avoid writing data to the defective sectors when new data is

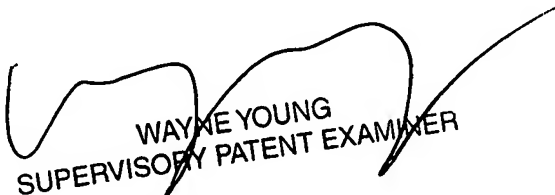
overwritten to the information recording medium. Takahashi (US PgPub 2002/0136537) disclose An information recording medium according to an aspect of this invention includes a data area (A2) for recording user data and an address area (DMA address area) for recording address data that indicates the position of a defect management area that manages a defect present in the data area. Ohata et al. (US 6,469,978) disclose an optical disk which enables recording and reproduction from optical disks with defect management formatted with different group configurations without changing the firmware of the conventional apparatus and to allow the size of the spare area to be specified at initialization, the position information indicating the position of the defect management area is recorded in the control data area provided in the read-only area of the optical disk, and the information indicating the first address or size of the spare area is included in the defect management area.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Alunkal/
Examiner AU 2627


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